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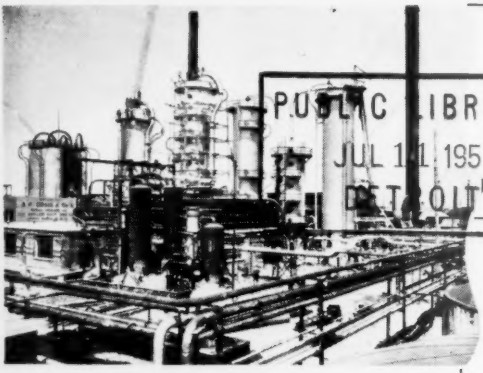

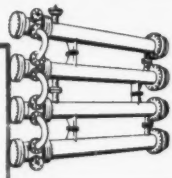

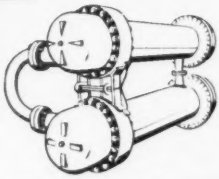

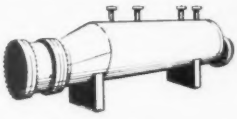

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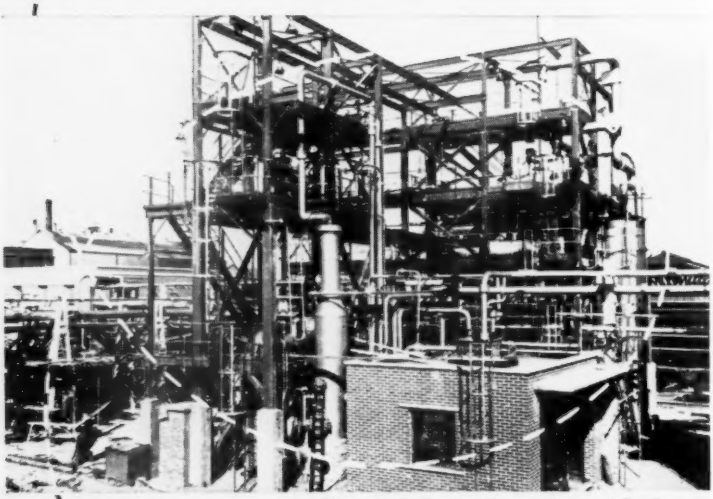

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THE INSTITUTE OF PETROLEUM

To the Queen's Most Excellent Majesty

MAY IT PLEASE YOUR MAJESTY
on the occasion of the Coronation of Your Majesty, the President Council & members of
THE INSTITUTE OF PETROLEUM
present their humble duty to Your Majesty and offer on behalf of the Institute the assurance of their loyal affection and attachment to Your Throne and Person.
WE PRAY THAT ALMIGHTY GOD
may vouchsafe to Your Majesty health and strength to reign for many years in happiness over Your Peoples in the United Kingdom and beyond the seas.

PRESIDENT

HONORARY SECRETARY

June 2nd 1953

THE LOYAL ADDRESS TO HER MAJESTY
THE QUEEN

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THE STORES ORGANIZATION IN AN OVERSEAS OILFIELD*

By D. S. CURTIS (Member)

There is a strong resemblance to a military operation in the supplying of a new oilfield thousands of miles from the home base. In Kuwait local resources could not take care of a fraction of the requirements, neither in 1947 nor in 1952. If the bazaar were drained dry of food and essential commodities, it would be but a drop in the bucket and would immediately cause a local problem. Therefore, the Kuwait Oil Co. has had to make itself self-supporting and the organizations by which this was undertaken were the Supplies Division in London and the Stores Department in Kuwait.

"Supplies *of* Oil" and "Supplies *for* Oil" are interrelated and interdependent. The supply organization of the Kuwait Oil Co. is responsible for the purchasing, shipping, and handling in Kuwait of everything used in all aspects of its activities. The function of the London end, known as the Purchase and Supply Branch, is to receive demands, invite tenders, place orders on manufacturers, and ship the material to Kuwait. The Kuwait end has to receive, store, and issue materials, and to produce indents for future requirements in sufficient time for their use.

Today in Kuwait there are nearly 100,000 items in store, some items can be counted on the fingers in units, others are measured by the ton, gallon, dozen, cubic centimetre, or the

*Summary of paper read to the Persian Gulf Branch at Ahmadi, Kuwait, on 15 June 1952.

square yard; in fact by every unit of measurement known to the school arithmetic book, plus a few more. They range from the seats of the chairs to the seats of the valves in the car, from the taps in the bath to valves opened to load the tankers, from pencils to pistons, and from cricket balls to crankshafts.

Confronted with this variety, as great as that of a large trading house, a sound system of classification must be the foundation of the supply organization in order to locate any given article in the shortest time. The system must satisfy three groups of people. First, the consumer, that he may go direct to the right store: secondly, the storekeeper, that he may lay out his store in a logical way; and thirdly, the stores accountant, who follows in the storekeeper's footsteps pricing every issue he makes, watching the value of the stock rise or fall, checking his stocks and generally acting as a policeman to the stores.

Perhaps the simplest arrangement would be an alphabetical one. How straightforward it would be if it could run on this basis with counters running from A to Z, but it would be difficult to have drums of grease, gas fires, gaskets, glue, and glass alongside one another on the shelf and on another batteries, bedsteads, bathtubs and bitumen.

Differences of nomenclature are another obstacle to the alphabetical system. One man will ask for a "stub axle" the other for a "half shaft". They both go away with the same item. One asks for "electrodes", the next asks for "welding rods", the third for "welding wire"; they are all after the same commodity. Sometimes the building engineers ask for "H" beams, other times for "I" beams; either way they get rolled steel joists.

Classification according to the raw materials can be done in a limited way, e.g. "metal" stores and "timber" stores, but only with metal and timber not made up for use. Most of the items are manufactured so that confusion would result if everything made of metal went into the metal stores, and there would be differences of opinion as to where an armchair, which contains fabric, rubber, wood, and metal, or a flow recorder made from several types of metal, glass, and paper, should be kept. So this system fails even more heavily than the first.

One more method is that in which departmental stores are kept in one section, a system working to a limited degree in plant spares, electrical, etc. Even then departments exclusively served by one store require dozens of sundries held elsewhere; for example, tools, general, or welding. To serve each department individually would involve problems of control, replenishment, and accounts.

The current classification in Kuwait is to some extent a compromise. In the main it is a functional arrangement. Thus, if the function of an article is connected with pipe fitting it is in the valves and pipe fitting store where it is available to pipeline, production, or engineering departments. The contents of the stationery stores are all functionally in the same class. Spare parts for machines are required by various sections of the engineering department, marine department, pipeline, or by production, but they are held together in plant spares.

This layout of the stores organization was next set out in the vocabulary of stores, the index and catalogue. In addition it lays down a vocabulary number for every item, which identifies that item in every aspect of the work to the storekeeper, the record clerk, stores accountant, Hollerith operator, and to the purchaser in London, or New York.

The setting up and maintaining of the vocabulary may be likened to an enormous jig-saw puzzle, where every item represents one piece. Some pieces fit easily in their places. Nobody would put fuse wire anywhere but in electrical

stores, but what about an electric cooker? It is a piece of electrical equipment but it is also a piece of kitchen equipment kept in outfits.

Stores Movement

Every item of stock has to be moved. Physically the movement starts from the factory in the U.K. or U.S.A., from there to the docks, to the ship, and thence to the port of Mina. Thence on by road, through the receiving section and into the appropriate stores section. Gradually the stocks leave the stores over the counter and are consumed.

No two of the 100,000 items are moving at the same speed. Some are moving quickly, while other goods move less rapidly, but in the same cycle.

How is this flow of materials maintained? How is continuity of supply maintained for such a variety of material when used in such varying quantities? Being thousands of miles from the sources of supply, there is no convenient warehouse from which a supply of a vital commodity temporarily out of stock can be bought. The answer is anticipation of demand. It has to be long distance anticipation.

Those responsible for stocking the stores nine months ahead have four major requirements. First, accurate statistics of previous uses of any commodity; secondly, accurate information of future requirements by departments; thirdly, a knowledge of prevailing market conditions at the source of supply; fourthly, a psychic mental capacity enabling the storeman to know how other people are going to make up their minds, or change their minds, before they have done so themselves.

Responsibility for the first requirement, rests upon the storekeeper and on an organization known in the Kuwait Oil Co. as the Central Posting Section. It is the storekeeper's responsibility to provide the information; C.P.S. records it and presents it for use as a basis of the replenishment programme and for the information of departmental consumers. Some oil companies have the entire responsibility for a given section vested with the storekeeper in charge who maintains his own records and in some cases himself produces the indents which replenish his stocks.

It is the storekeeper's responsibility to furnish two important pieces of information. First, he passes on the requisition after the stores have been issued, and secondly, he contributes towards the maintenance of the records by regularly checking random items of stock, reporting on any discrepancies he finds.

Details of newly arrived materials are reported direct to central posting section by the receiving section, who open and check the contents of all cargo received for the stores, at the same time preparing documents which acknowledge receipt and clear the company's invoices.

In the central posting section a record card is maintained for every item of material held, the cards being kept in cabinets corresponding to the various sections. Each posting clerk looks after two or more sections and whilst posting, subtracts the quantity issued from the previous balance and records the job number. He also records quantities of new materials arriving. Thus, it is possible to verify the number of goods in stock and to ascertain the quantities which have been received and despatched. By this system, departments notify their detailed requirements for operational projects, and their demands are compared with figures of stores available and such stocks as possible are reserved for a particular job. Thus, stocks of any item of stores may be divided into reserved stock, only to be issued for a specific project, and free stock available to all consumers.

These are the stores statistics available for compiling future demands. In this respect, Kuwait is fortunate that all stores and all records are centralized

within a radius of ten miles, and there is only one centre of operations. In companies operating over large geographical areas, with various centres of operations, the problem of the collection of information regarding stocks as a whole is a complicated one.

The next requirement of the stores department in keeping up the steady flow of materials is accurate knowledge of future requirements of an exceptional nature.

There is one more factor to consider before the picture is complete on the supply and demand problem, namely the conditions prevailing in the market where supplies are purchased.

This, in a very broad outline, is the overall picture of the Kuwait provisioning system. It takes no account of the hundred and one day to day complications which arise, the mistakes that spring from the human element all along the line, the perpetual unexpected event, but it gives an idea of how is maintained the continuous cycle of events which will produce the goods wanted, when they are wanted, from the stores.

An important part of the Kuwait supply system is the traffic division, which handles all imports and exports, internal transfers, and returned materials together with all the documentation entailed. Stevedoring is a skilled trade and a thorough knowledge of this work is needed. A modicum of maritime law and all matters concerned with bills of lading, manifests, claims, outturn reports, etc., must be competently dealt with. In the early days ships were discharged overside into lighters in Kuwait Bay. Lighters were towed the ten miles or so to Shuwaikh where the material was unloaded on a small and inadequate jetty by insufficient and unserviceable cranes. So fast did the material arrive, so few were the barges, that speedy turn-round of barges and transport was imperative to keep the ships working, and so a dumping ground in Shuwaikh was required as a transit area. The crane problem again became acute, for this necessitated a further two handlings at Shuwaikh—making three in all. Where possible, cargoes were dispatched direct to destination but only for bulk cargoes direct ex-lighters was this practical. The destinations were Magwa, Ahmadi, Mina, and Warah, so that mixed loads being dispatched only further delayed deliveries and increased handlings. At the final point of receipt cranes were again the limiting factor to careful handling, intelligent placing of material, and sensible segregation. Hundreds of thousands of pounds have subsequently been spent in rectifying the confusion and impractical warehousing caused by the lack of cranes in those early days.

★ ★ ★

AIOC U.K. REFINERIES

Provisional figures for 1952 show that the U.K. refineries of Anglo-Iranian processed nearly 1½ million more tons of oil than in 1951. Comparative figures:

	1952	1951
	thousand tons	
Llandarcy . . .	4,254	3,671
Grangemouth . .	2,375	1,512
Pumpherston . .	159	149
.	6,788	5,332

The first cargo from the new Kent refinery for overseas markets left on 8 March, when the *Rolf Billner* sailed with 13,500 tons of fuel oil for Aden.

★ ★ ★

Iraq Royalties—For the period April 1952-March 1953 the Iraq Government's share of profits from the sale of Iraq crude amounted to £39·9 million.

THE COUNCIL AND OFFICERS OF THE INSTITUTE 1953-4

At the Annual General Meeting of the Institute on 21 April, **Mr H. S. Gibson**, C.B.E., M.A., M.I.Mech.E., was nominated by the Council for re-election as President for the session 1953-4. The nomination was unanimously approved by the members and Mr Gibson, accepting the presidency for a second term, thanked his colleagues on the Council for the support they had given him during the past year.

H. S. Gibson, C.B.E.

VICE-PRESIDENTS

At the same meeting two new vice-presidents were nominated by the Council to serve for a term of three years, and were approved without dissent.

J. A. Oriel, C.B.E., M.C., M.A., B.Sc., F.R.I.C., who has been previously a vice-president (1943-1948), a Member of Council since 1940, and has served on many committees of Council.

Born in South Wales in 1896, Mr Oriel had obtained his B.Sc. and was still studying at Cardiff University when the first world war broke out. He immediately joined the Army and was awarded the Military Cross for gallantry in the Battle of Arras in 1917. He was wounded three times and temporarily blinded by mustard gas.

On his return to civil life Mr Oriel went to Cambridge University, where he took his Part II Tripos in 1921 and then he joined the Shell Group as a chemist in their Central Laboratories. He subsequently served in various technical posts in Shell Haven and Suez refineries and was appointed refinery manager in Suez in 1934.

On leaving Suez in 1935, Mr Oriel spent a period in the Chemical Department of the Asiatic Petroleum Company prior to moving to The Hague in 1937. He remained in Holland until 1938, when he returned to the U.K. and was appointed General Manager of the newly-formed "Shell" Refining & Marketing Co. In 1940, on the retirement of James Kewley, Mr Oriel in addition took over the post of chief chemist of the Asiatic (now Shell) and Anglo-Saxon Petroleum Companies.

The last war provided Mr Oriel with many opportunities for displaying his typical energy, enthusiasm, and ability; among the major projects for which "Shell" Refining & Marketing Company, under his management, was responsible, were the construction and development of the Thornton Research Centre, the extensions of the refineries at Stanlow and Shell Haven, the extensive wartime pipeline network, and the design and operation of the refinery at Heysham for the manufacture of aviation gasoline. In 1945, when the war was nearing its end, he organized and headed missions to Germany to inspect captured German refineries and to interrogate German scientists. In 1946 he was awarded the C.B.E. for his services to the war effort.

Despite the wide range of his Company activities, Mr Oriel found time to take considerable interest in educational and scientific circles. He was associated with the establishing of the "Shell" Chair of Chemical Engineering at Cambridge, and has been an active member of many scientific boards and institutes.

Unfortunately, in 1949 the delayed effects of mustard gas brought on blindness, with the result that he had to retire from active work with the Shell Company.

G. H. Thornley, M.Sc. (Tech.), was born 50 years ago in Douglas, Isle of Man. He was educated at Douglas Secondary School and Manchester University, where he took the degree of Master of Technical Science. In January 1925 he joined the staff of C. C. Wakefield & Co. Ltd. with the immediate object of carrying out a programme of research into the testing of transformer oils but remained with the Company to be placed, five years later, in charge of their laboratory in Liverpool.

After the war, he was transferred to Head Office as manager of the Department for Technical Information and in 1951 was further promoted to the post of Technical Manager for the entire Wakefield Group of Companies.

George Thornley joined the Institute of Petroleum in 1934, was elected a Fellow in 1939 and has, since 1945, been a member of the Council of the Institute. He was a Founder Member of the Northern, Stanlow, and London Branches and was Chairman of Northern Branch from 1946 to 1948. He is also Chairman of Branches Committee and Deputy Chairman of Election Committee.

He is married and has one son, aged 13. His hobby is gardening.

COUNCIL

As the result of the ballot for eight vacancies on the Council the following were declared elected for a period of three years:

Re-elected members:

E. LeQ. Herbert, B.Sc., F.R.I.C.
F. Morton, D.Sc., Ph.D., F.R.I.C.
G. H. Smith, Ph.D.
A. T. Wilford, B.Sc., F.R.I.C.
C. S. Windebank, B.Sc., M.S.

New members:

A. C. Hartley, C.B.E., F.C.G.I., B.Sc., M.I.C.E., M.I.Mech.E.
A. J. Ruthven Murray, M.A., B.Sc., F.G.S.
C. G. Williams, D.Sc., M.I.Mech.E., F.R.Ae.S.

A. Clifford Hartley, C.B.E., F.C.G.I., B.Sc. (Lond.), (Eng). M.I.C.E., M.I. Mech.E., was educated at Hymers College, Hull, at Hull Municipal Technical Institute, and at the Central Technical College, Imperial College, London, where he gained the A.C.G.I. Diploma, and graduated with an Honours B.Sc. degree in 1910.

From 1910 to 1924 he occupied positions in the engineering world, and from 1916 to 1919 served in the RFC and the RAF, reaching the rank of substantive major and being awarded the O.B.E., and twice mentioned in despatches.

In 1924 he joined the Anglo-Iranian (then Anglo-Persian) Oil Co. as assistant manager of the engineering department and in 1932 was seconded to the Iraq Petroleum Co. Ltd. for design and development work on the Kirkuk-Mediterranean pipelines. He returned to Anglo-Iranian in 1934 as chief

engineer, a post which he held until the end of 1950. Since his retirement from Anglo-Iranian he has been a consultant to the Company and to the firm of Messrs Rendel, Palmer, and Tritton, and is a director of Messrs Johnson and Phillips Ltd.

Mr Hartley, who was previously a member of the IP Council (1934 to 1942) and a vice-president (1942 to 1948), was president of the Institution of Mechanical Engineers (1951-2), is a member of council of the Institution of Civil Engineers and of the Royal Society of Arts, and is a member of various engineering and research associations.

During the second world war Mr Hartley was with the Petroleum Division of the Ministry of Fuel and Power and played an important part in the design and development of the PLUTO cross-channel pipelines, with the FIDO fog dispersion scheme, and flame-weapon development. He was technical director of the Petroleum Warfare Department, was awarded the C.B.E. in 1944, and the U.S. Medal of Freedom in 1946.

A. J. Ruthven Murray, M.A., B.Sc., F.G.S., was born in 1900, the son of E. T. Ruthven Murray, general manager and chief engineer of the North Metropolitan Electric Power Supply Company, and grandson of Sir James Murray, editor of the Oxford English Dictionary. Educated at St. George's School, Harpenden, he joined the Royal Naval Air Service in 1917 and afterwards the Royal Air Force, in which he served as a pilot.

After the war, he entered Hertford College, Oxford, and took a B.A. in the Honours School of Natural Science (Geology).

In 1921 he joined the Anglo-Ecuadorian Oilfields Ltd. and Lobitos Oilfields Ltd. as geologist and served for four years in Ecuador and Peru. In 1925 he joined the Anglo-Persian Oil Company and carried out exploration geological surveys in Venezuela, Colombia, and Trinidad.

Returning to Oxford University, Mr Ruthven Murray took his degree of M.A. and carried out research work, for which he obtained the degree of B.Sc.

In 1927, Mr Ruthven Murray rejoined Lobitos Oilfields Ltd. and carried out exploration surveys in Colombia. In the following year he joined Kern Trinidad Oilfields Ltd., becoming general manager of the Company early in 1929, in which position he served until July 1942, when he became general manager of Trinidad Leaseholds Ltd. in Trinidad.

In 1947, Mr Ruthven Murray was Transferred to London as manager, London, and in April 1948 became assistant managing director of the Company. In July 1951 he became managing director.

C. G. Williams, D.Sc., M.I.Mech.E., F.R.Ae.S., who was elected to the Institute in 1941, is director of Research in the U.K. for the Shell Petroleum Company Ltd. and manager of the Product Development and Research Department of the same Company. He is a member of the Council of the Automobile Division of the Institution of Mechanical Engineers.

After taking degrees in engineering at London and Manchester Universities, including his D.Sc., he was engaged for some years on co-operative research in the motor industry, finally becoming in 1934, director of research of the Research Laboratories of the Institution of

Automobile Engineers, a position which he held until he joined the Royal Dutch-Shell Group in 1940.

In 1940 Dr Williams was appointed director of research of the Aero Engine Research Laboratory at Thornton which was then under construction and he was, in fact, the first person to join what subsequently became the Thornton Research Centre. During the war the Aero Engine Laboratory operated for the Ministry of Aircraft Production in association with Shell on various problems concerned with aviation fuels and lubricants. After the war, other research activities which had developed at Thornton on lubricants, chemicals, and diesel fuel were integrated with the Aero Engine Laboratory into the Thornton Research Centre, Dr Williams becoming Director of Engine Research under Brigadier R. A. Bagnold. When the latter left Shell in 1948, Dr Williams became director of research United Kingdom. In 1952 on the formation of the Product Development and Research Department in Shell's head office, he became its first manager, at the same time retaining his position as director of research United Kingdom.

As the result of the above elections the vice-presidents and council for 1953-4 are:

Vice-Presidents:

E. B. Evans, M.Sc., Ph.D., F.R.I.C. (*Esso Development Co. Ltd.*)
H. Hyams (*The Shell Petroleum Co. Ltd.*)
J. A. Oriel, C.B.E., M.C., M.A., B.Sc., F.R.I.C.
H. E. F. Pracy, B.A., M.I.Chem.E. (*Trimpell Ltd.*)
R. B. Southall (*National Oil Refineries Ltd.*)
G. H. Thornley, M.Sc. (*C. C. Wakefield & Co. Ltd.*)

Members of Council:

W. S. Ault, B.A. (*The Shell Petroleum Co. Ltd.*)
V. Biske, LL.M., B.Sc., F.R.I.C. (*Lobitos Oilfields Ltd.*)
C. D. Brewer, M.I.Mech.E. ("*Shell*" *Refining & Marketing Co. Ltd.*)
E. J. Dunstan, M.Sc., M.I.Chem.E., (*Barton Oil Refining Ltd.*)
F. L. Garton, M.A., B.Sc. (*The Shell Petroleum Co. Ltd.*)
A. J. Goodfellow, B.Sc., A.R.I.C. (*Carless, Capel & Leonard Ltd.*)
A. C. Hartley, C.B.E., F.C.G.I., B.Sc., M.I.C.E., M.I.Mech.E.
E. LeQ. Herbert, B.Sc., F.R.I.C., M.I.Chem.E. ("*Shell*" *Refining & Marketing Co. Ltd.*)
E. C. Masterson, B.Sc. (*Kuwait Oil Co. Ltd.*)
A. J. Ruthven Murray, B.Sc., M.A., F.G.S. (*Trinidad Leaseholds Ltd.*)
J. S. Parker, M.A., B.Sc. (*Lobitos Oilfields Ltd.*)
D. L. Samuel, B.Sc., A.R.I.C., (*The Shell Petroleum Co. Ltd.*)
G. H. Smith, Ph.D., F.R.I.C. (*Scottish Oils Ltd.*)
A. R. Stark, B.Sc., A.R.I.C. (*Anglo-Iranian Oil Co. Ltd.*)
E. J. Sturgess, B.Sc. (*The Shell Petroleum Co. Ltd.*)
W. H. Thomas, A.R.S.M., F.R.I.C. (*Anglo-Iranian Oil Co. Ltd.*)
O. F. Thompson, O.B.E. (*The Shell Petroleum Co. Ltd.*)
A. T. Wilford, B.Sc., A.R.C.S., F.R.I.C. (*London Transport Executive*)
C. G. Williams, D.Sc., M.I.Mech.E., F.R.Ae.S. (*The Shell Petroleum Co. Ltd.*)
C. S. Windebank, M.S., B.Sc., A.M.I.Chem.E. (*Esso Development Co. Ltd.*)

EX-OFFICIO MEMBERS OF COUNCIL

The following were elected as *ex-officio* Members of Council to represent the Branches:

S. A. Berridge (*Fawley*)
A. W. Deller, D.F.C. (*London*)
H. H. Ballard (*Northern*)

W. M. Stirling, A.H-W.C., A.M.I.E.E. (*Scottish*)
N. W. Grey, M.I.Chem.E., M.E.I.C. (*South Eastern*)
E. J. Horley (*South Wales*)

HONORARY OFFICERS

G. H. Coxon (*Anglo-Iranian Oil Co. Ltd.*) and **C. Chilvers**, B.Sc., F.R.I.C. (*Esso Petroleum Co. Ltd.*) were unanimously re-elected as honorary treasurer and honorary secretary respectively.

★ ★ ★

MONOGRAPHS FOR STUDENTS OF APPLIED PHYSICS

The Institute of Physics are publishing a series of authoritative booklets on branches of applied physics. The booklets are intended for general reading by students in Higher National Certificate in applied physics courses or in the first two years of a degree course in science or engineering.

The first four booklets, now on sale at 5/- each, are entitled: (1) *Fundamentals of thermometry*, which includes chapters on the temperature scale, standard thermometers, thermocouples, and optical pyrometers, and realization of the international temperature scale: (2) *Soft magnetic materials used in industry*, which includes chapters on magnetism, ferro-magnetism, commercial magnetic materials, silicon-iron, nickel-iron alloys, and soft magnetic materials; (3) *Practical thermometry*, which includes chapters on electrical resistance and expansion thermometers, thermocouples, optical and radiation pyrometers, calibration of instruments, and temperature measurement, and (4) *The magnetic circuit*, which includes chapters on magnetic powder cores, ferrites and permanent magnets and magnet materials. Copies may be obtained from the Institute of Physics, 47 Belgrave Square, London, S.W.1.

WATER FOR ADEN REFINERY

During construction of Anglo-Iranian's new refinery at Aden, 500,000 gallons of water per day will be needed for domestic purposes in the construction camps. To provide this five wells are being drilled ten miles away, where the water table is about 230 feet down, and a 6-inch pipeline will convey the water to the site.

When the refinery is completed, the daily requirements of domestic and some process water will be about 2,000,000 gallons. For this quantity probably ten wells will be needed and a 12-inch pipeline.

Cooling water for refinery and power station—about 4,000,000 gallons per hour—will be drawn from the sea and returned through separators to remove all trace of oil.

Work in progress in the breakwater area at the new Aden refinery site.

For boiler fuel purposes about 400,000 gallons per day of fresh water evaporated from sea water will be provided by three Weir triple-effect evaporating and distilling plants.

★ ★ ★

Samuel Baxter Prize.—The Council of the Institution of Naval Architects announce that entries for the Samuel Baxter Prize for 1953 should be submitted by 31 December. The prize is awarded for the *paper or essay or description or drawing of any new design, invention, process, equipment, etc., relating to safety and/or efficiency in sea-going vessels.*

PERSONAL NOTES

W.E.V. Abraham, C.B.E., B.Sc., M.Inst.Pet., managing director of Burmah Oil Co. Ltd. and its subsidiaries, has been appointed a director of Anglo-Iranian Oil Co. Ltd. in succession to **Sir H. B. Heath Eves,** F.Inst.Pet., who has resigned from the Board. Mr Abraham is 55 years of age and has been in the service of the Burmah Oil Co. since 1920.

Vernon L. Farthing, M.I.Mech.E., M.I.Mar.E., F.Inst.Pet., who was inducted into the presidential chair of the Liverpool Engineering Society on 16 April, is also a committee member of the new North West Branch of the Institute of Marine Engineers.

Dr G. Egloff, M.A., D.Sc., Ph.D., F.Inst.Pet., has been elected an honorary member of the Association Française des Techniciens du Pétrole.

P. F. Matthews has been appointed Information Officer of Vacuum Oil Co. in succession to Edward Symonds.

Awards for brave conduct during the floods of February included the B.E.M. to S. S. Wood (left), water intake operator at the Coryton refinery of Vacuum Oil Co., and of the Queen's Commendation for Brave Conduct to F. Sage, telephone operator at Coryton.

Brigadier D. A. Whitehead, C.B.E., D.S.O. and Bar, M.C., Croix de Guerre, will march at the head of Australia's 238-strong male contingent in the Coronation procession. Known as 'Torpy', Brigadier Whitehead has, since 1946, been staff manager for Shell in Melbourne.

J. A. V. Wilson, O.B.E., general manager and director of C. C. Wakefield & Co. Ltd. has been elected to the Board of the associate companies, W. B. Dick & Co. Ltd. and J. B. Pillin Ltd.

H. H. R. Drossie has resigned from the Board of W. B. Dick & Co. Ltd. on account of ill-health.

Sir Henry Wilson Smith, director of Vacuum Oil Co. Ltd., has been appointed by the President of the Board of Trade to be chairman of an independent committee to review problems of duty-free entry of machinery into the U.K.

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OIL SEARCH IN TURKEY

A geological survey of prospective oil areas in Turkey is to be undertaken by Standard Oil Co. (New Jersey). Until last year government controlled enterprise had been in effect in Turkey for many years, but the oil policy has now been de-nationalized and legislation is now under consideration for the development of the country's oil resources.

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BP Map of Cornwall.—The attractions, the legends, and the history of Cornwall are excellently portrayed in a pictorial map recently issued by Shell-Mex and BP Ltd., from whom copies are obtainable.

Among those at the Birmingham dinner were (l to r) *Prof. F. H. Garner, R. B. Shearn, F. Mohtadi, Prof. Frank Morton* (of the University staff), *W. B. Heaton* (Trinidad Leaseholds Ltd.), *E. J. Dunstan* (Barton Oil Refinery Ltd.), *Dr R. T. W. Hall* (Esso Petroleum Co. Ltd.), *A. G. K. Ashworth* (Thomas Hedley Ltd,), *Dr W. B. Norman* (University College London).

BIRMINGHAM STUDENTS' DINNER

"The Fuel Industries" was the theme of the sixth Annual Dinner of the Birmingham University Chemical Engineering Society and Student Section of the Institute of Petroleum, which was held on 30 April with K. L. Piggott, chairman of the Society, presiding.

Consequently, the guests of honour were representatives of the three basic fuel industries. Thus, for coal there was Dr D. T. A. Townend, C.B.E., president of the British Coal Utilization Research Association; gas by Dr F. J. Dent, director of the Birmingham Research Station of the Gas Council; and petroleum by R. B. Southall, a vice-president of the Institute of Petroleum.

Among the other guests present were W. E. Alwyn, M.C. (*The Midland Tar Distillers Ltd.*), Dr J. W. Barrett (*Monsanto Chemicals Ltd.*), Dr E. T. Borrows (*Petrochemicals Ltd.*), E. J. Dunstan (*Barton Oil Refinery Ltd.*), Dr R. T. W. Hall (*Esso Petroleum Co. Ltd.*), W. B. Heaton (*Trinidad Leaseholds Ltd.*), D. A. Hough (*General Secretary, IP*), Dr A. H. Kaye (*Cabot Carbon Ltd.*), V. P. King (*United Overseas Petroleum Co. Ltd.*), I. McCallum (*Esso Petroleum Co. Ltd.*), and G. Sell (*Editor, IP*).

Professor F. H. Garner, O.B.E., president of the Society, proposing the toast of "The Fuel Industries", stressed the

At the top table (l to r): *H. A. Rollinson, Dr D. T. A. Townend, K. L. Piggott, and* (in the right-hand picture) *Prof. F. H. Garner, Dr F. J. Dent, D. W. Fosbury, R. B. Southall, and J. W. Davis.*

Dr F. J. Dent, K. L. Piggott, and R. B. Southall.

need for fuel economy and pointed out that the study of this aspect of fuel technology was of great importance to chemical engineers. There was an ever-increasing demand for more technologists in this field. The main stumbling block to the training of more applied scientists was the shortage of university buildings, the provision of which was a matter of urgency.

Dr D. T. A Townend, responding to the toast on behalf of the coal industry, said that fuel economy was of common interest to all present. Whereas with coal, inefficiency was revealed by smoke, with gas and oil it often passed unrecognized; and he was glad to note that one of the petroleum companies had recently prepared an excellent film showing how waste heat recovery was contributing to economy in the use of oil. While the coal industry had done much to abate the smoke nuisance, he thought the smoke frequently issuing from heavy motor vehicles ought also to be reduced.

Thermal efficiency was important; but a point often overlooked was the need for efficient use of man power in the fuel industries, particularly having in mind national productivity. Dr Townend, quoting statistics, showed that 1 in 8 or 9 of the working population was engaged in the production, distribution and utilization of coal, gas and electricity. For example, the winning of 1000 tons of coal occupied about 3½ man years.

J. E. Grew (left) with V. P. King and a group of students.

Prof. F. Morton, W. B. Heaton, R. S. Mortimer, and E. J. Dunstan.

Speaking of the future, Dr Townend said that with the lessening availability of fuel and a growing population, it was important to appreciate the value of the brains—in the form of "know-how"—of the chemical engineer. The economy of the country would in future depend not only on fuel supplies but more and more on inventive genius and individuality; and in the fuel industries the chemical engineer occupied a position of the greatest importance.

Dr F. J. Dent, replying for the gas industry, said that gas has a major contribution to make to fuel economy. One result of nationalization of the gas industry in the U.K. had been the merging of more than 700 of mostly

small undertakings into twelve area boards. This had led and will continue to lead to closer scientific control of gas production with more efficiency and economy.

In regard to the scarcity of fuel, this had mostly been felt in the shortage of coking coal. As a result, methods of treating non-coking coals under pressure had been developed which produced more gas and, possibly, a good coke. And pressure gas was a fuel which could easily be transported over long distances through pipes.

He concluded by stressing the importance of the chemical engineer in these developments.

R. B. Southall, responding for the petroleum industry, and the Institute of Petroleum, said that although the petroleum refining industry was new in comparison with coal and gas, which had been dealt with by earlier responders, it was no longer an interloper in the U.K. In fact, it had grown to a size with a potential output of about 27 million tons per annum, which was bigger than what was regarded as a basic industry—iron and steel.

It was unlikely that the petroleum industry would give employment to as large an extent as other big industries, but it would have need and scope for chemical engineers. The petroleum industry needed the assistance of chemical engineers now for its current phase of development, which was the result of earlier pure and applied research work leading to the present considerable expansion of the British petroleum industry.

K. L. Piggott, Prof Stacey Ward, and Dr D. T. A. Townend.

Wishing the Society every success, Mr Southall expressed regrets from Mr H. S. Gibson, President of the Institute of Petroleum, at being unable to be with them that evening and said that the Council of the Institute hoped that the Birmingham Student Section of the Institute of Petroleum and the Chemical Engineering Society, with which it was so closely associated, would grow from strength to strength.

R. S. Mortimer, junior treasurer of the Society, proposed the health of "The Guests" and thanked them for the interest they had taken in the students and in the provision of vacation courses.

V. P. King replied on behalf of the guests and expressed their thanks for an enjoyable evening. Personally, he had had a pleasant association with Birmingham University and was happy to

Two of the tables—an indication that guests and students enjoyed the proceedings.

have been able to provide some assistance in regard to vacation courses.

W. E. Alwyn, M.C., proposing the toast of "The Society", stressed the importance of the chemical engineer and the need for technical men to take administrative positions in industry. They should not restrict their interests to the acquisition of chemical and similar data, but should study the running of chemical and similar plants, should take an active part in the organization of their societies, learn how to get along with their fellows, and should spread their interests.

K. L. Piggott, chairman of the Society, responded.

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The largest crane in Australia was required to place in position the top section of a 150-foot distillation column at Shell's new refinery at Geelong, near Melbourne, Australia, which is due for completion in mid-1954. To carry products to Melbourne an 8-inch pipeline 36 miles long will be constructed.

ISLE OF WIGHT DRILLING STOPPED

The bore hole which D'Arcy Exploration Company, prospecting subsidiary of Anglo-Iranian, has been drilling at Arreton in the centre of the Isle of Wight, has been abandoned at 5161 feet. Drilling was commenced in October 1952, and although there was evidence that oil had at some time been present in the strata penetrated, no exploitable quantities remain.

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COURSE ON USE OF LIQUID FUELS

A three days residential course for engineers and others interested in the use of liquid fuels, arranged by the Ministry of Fuel and Power in collaboration with Cambridge University authorities, is being held at the Cambridge University Engineering Laboratory from 29 June-1 July and will provide information on the efficient utilization of liquid fuels. Details are obtainable from the Regional Fuel Engineer, Ministry of Fuel and Power, Brooklands Avenue, Cambridge.

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POSTER FOR SCHOOLS

The Petroleum Information Bureau has published a poster which portrays sequential stages in oil prospecting, drilling, refining, and transport. It is issued free to schools, on request to P.I.B., 29 New Bond Street, London, W.1.

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SMBP Coastal Tankers—The motor tanker *Dovedale H* recently acquired by Shell-Mex and B.P. Ltd. from John Harker (Coasters) Ltd. has been renamed *B.P. Supervisor*. This vessel of 860 gross tons and of 1072 dw tons was originally the *Empire Tedburgh* built at Sunderland in 1946.

Occupational Dermatitis—Details of various barrier creams for protection against industrial dermatitis are given in a booklet available from Innoxa Laboratories, 1 Eden Street, London, N.W.1.

Taken at the London Branch Fork Supper, these pictures in the bar (left) and the supper room (right) indicate the success of the function. There were others in the lecture theatre watching films.

AROUND THE BRANCHES

FAWLEY, LONDON, NORTHERN, PERSIAN GULF, SCOTTISH, SOUTH EASTERN, SOUTH WALES, STANLOW, TRINIDAD

London Branch

At Manson House on 25 March, London Branch members had the privilege of listening to the President of the Institute, Mr H. S. Gibson, talk on the subject of the discovery and development of an oilfield.

Mr Gibson took as his example the Zubair field of Southern Iraq and discussed pre- and post-war developments. Of particular interest to many of his listeners were the details given by the President of conditions covering oil concession agreements. The fact that oil must be in production within seven years of the signing of the concession imposes a time limit calling for great effort on the part of the exploration team, having in mind the difficult nature of the terrain.

He made many informative observations on the various problems associated with field surveys, drilling, and the building of ocean terminals. His talk was illustrated with many slides and the number of questions raised at the end of the meeting clearly indicated wide interest among the audience.

After W. H. Davies, the vice-chairman, who in the absence of A. W. Deller was in the chair for the evening, had thanked Mr Gibson for an enjoyable talk, there followed the usual informal dinner at the Bolivar, at which the President was the guest of the Branch.

At the meeting on 27 April, Dr R. C. Fisher addressed the Branch on "Some design philosophy and engineering procedure in petroleum plant construction."

This interesting and comprehensive address covered all aspects of the problems facing the chemical engineer in designing and constructing plant for the petroleum industry. Dr Fisher commented on conjecture and facts as design bases and applied his arguments to laboratory investigations, pilot plant work, and detailed study for the work on site. He devoted considerable time to discussing the engineer as an individual, and his training and aptitude.

The many questions which were asked at the close of Dr Fisher's talk exemplified the great interest of his audience.

The meeting was followed by a very successful Fork Supper at which many members were able to meet old friends. The success of the supper is shown by the pictures in this issue.

Ladies at the Fork Supper included, here chatting with Alec Mauchan, Mrs. H. G. Spence, shortly to join her husband in Bahrein, while—

Persian Gulf Branch (Bahrein Sub-area)

The Bahrein Sub-Area of the Persian Gulf Branch met on 12 April in the auditorium of the Bahrein Petroleum Company's Preparatory School. The main part of the meeting was the showing of a film "Basic Principles of Lubrication", which was the second of the two films loaned to the Bahrein Sub-Area by the Esso Petroleum Company. The film demonstrated visually the underlying principles of lubrication with the aid of animated diagrams and charts. The film also defined the three main types of lubrication and showed various applications of petroleum lubricants to industry.

After the film, H. G. Spence, the Bahrein Petroleum Company's lubrication engineer, ably handled a very interesting discussion in which members and guests participated. The discussion ranged from queries on points raised in the film to a discussion of various special types and applications of lubricants.

Scottish Branch

At the meeting in Edinburgh on 23 April, J. M. Caldwell, J.P., chairman of the Branch, presided, and in introducing the lecturer, Mr H. S. Gibson, President of the Institute, said that the Scottish Branch was honoured by the presence of the president. He said that the Scottish members appreciated this as few of the members had the opportunity of attending meetings in London or of meeting the president. Mr Caldwell in outlining Mr Gibson's career said that he was an outstanding authority on petroleum production, and since 1950 had been Managing Director of the Iraq Petroleum Co.

Mr Gibson spoke on the mechanics of the production of oil from the limestone fields of Persia and Iraq.

The three different mechanisms whereby oil is extracted from oilfields are: (1) water drive; (2) gas cap drive; (3) dissolved gas drive.

This is also the order of their efficiencies in reservoir rock of high permeability. The limestone fields of Persia and Iraq consist of marine limestone of widely differing porosities and permeabilities, and are extensively fractured by folding. The fissures resulting from this fracturing are the channels by which oil is delivered to the producing wells. As the permeability of these reservoirs, therefore, ranges from the almost infinitely high value of the fissures to the extremely low value of the lowest porosity limestone, the

—the guests included H. S. Gibson, president of the Institute, Dr R. C. Fisher, who had just delivered an address, E. LeQ. Herbert, with Alan Deller, chairman of the Branch.

efficiency of oil recovery varies from almost 100 per cent to zero.

It is generally found that the first and third mechanisms operate in these fields, their respective efficiencies depending upon the structure of the reservoir.

No two oilfields are exactly alike, and close observation is necessary to determine how the oil is produced, since it is desirable that this information should be available as early as possible in order that the field may be so controlled and the maximum amount of oil extracted.

In the Masjid-i-Sulaiman field it was found that dissolved gas drive was the predominant mechanism, with water drive as a subsidiary. Under these conditions it was found necessary to operate the reservoir so that the fall in pressure was uniform over the whole field, and also so that there was no sudden increase in rate of pressure drop plotted against time.

The Kirkuk field in Iraq is very similar in many ways to the Masjid-i-Sulaiman field, but in two respects it differs—it has more bands of limestone of considerably higher permeability and porosity and possesses a much more extensive system of fissures. Water drive appears to be the predominant production mechanism, with dissolved gas drive as yet contributing but little. The field is still in the early part of its producing life, however, and dissolved gas drive will probably increase its contribution with the passage of time. So far the field has not required to be controlled in regard to distribution and rate of pressure reduction. During the past twelve months the offtake has been increased by a very large amount without any serious effects. This may be due to the fact that the Kirkuk field is sufficiently large to carry such a change, and also to the fact that it has only a small gas dome.

In contrast to both Masjid-i-Sulaiman and Kirkuk, the oilfield which has recently been brought on to production at Ain Zalah presents some very interesting characteristics. This reservoir consists of two producing horizons, which are both fractured limestones of relatively low porosity and permeability. The two horizons have only limited connexion with one another, but the whole of the offtake can be drawn either from the one or the other if a sufficient pressure differential is allowed to build up between them.

The oil in both horizons is very much undersaturated and so there is no gas dome. As a result pressures are falling very rapidly with production. If, as in Kirkuk and the Persian fields, there is no flow of water into the reservoir system from an external source, the rapid fall in pressure may be due to the decompression of a relatively small volume of liquid.

Several members took part in the discussion which followed the lecture and a vote of thanks was proposed by the Chairman.

South Wales Branch

The Annual General Meeting was held at Llandarcy on the 5 February under the chairmanship of J. A. Green, Branch Chairman.

The three vacancies on the Committee for 1953/4 Session were filled by the nomination and election of R. B. Southall, J. A. Green, and E. J. Horley.

The Branch Auditors, C. E. Jones and E. J. Jones, were thanked for their services and re-elected for the ensuing Session.

Thanks were also accorded to the secretary, E. J. Horley, and to the Committee.

The proposed titles of papers for the 1953/4 Session was agreed.

At a meeting on 5 March under the Chairmanship of Mr J. A. Green, Mr W. C. Greaves, technical superintendent of the National Oil Refineries Ltd., gave a lecture on the pattern of Llandarcy.

Opening with the reasons for the siting of the refinery, Mr Greaves said

it commenced operations in 1921. Slides were shown illustrating changes in the plant and comparisons of throughput and products between pre-war and present day conditions.

It was interesting to note that increases in throughput had kept pace with the rate of refinery expansion in the U.K. generally. Of particular note were the high throughputs achieved through the distillation units as compared with design.

Another feature was the handling at the jetties in 1952 of some 8·2 million tons combined imports and exports with substantially little extra tankage and facilities than those available in 1946.

Reference was made to the production and bottling of propane and butane, in which Llandarcy were pioneers.

In describing and comparing the products, Mr Greaves mentioned the Autofining process now being used in the desulphurization of white spirits and tractor vaporizing oil and the new SO_2 solvent plant for kerosines which replaced the plant lost due to enemy action in 1940. This particular plant is of special interest in that it is claimed to be the first electronically operated unit in the world.

Reference was made to the latest unit to be commissioned — the catalytic cracking unit—which had the immediate effect of re-adjusting the motor spirit production both as to quantity and quality. The increased gas production had resulted in a widespread changeover from the use of fuel oil to gas firing in the refinery furnaces and pipestills.

Mr Greaves finally described the new plants under construction for lubricating oil production—a propane dewaxing unit, furfural extraction unit, and the M.E.K. dewaxing unit—which will be innovations at Llandarcy.

A. C. Vivian proposed the vote of thanks and E. S. Squire seconded.

On 9 April, Mr T. D. Ambrose, divisional fuel oil manager, Shell-Mex and B.P. Ltd., Midland Division, spoke on the subject of fuel oils—distribution and uses,—the chairman being J. A. Green.

Mr Ambrose quoted statistics indicating the growth in the use of fuel oils and then went on to describe the various means of distribution and the regional distribution system. He next described briefly some of the many industrial uses of fuel oils, illustrating his remarks by means of lantern slides showing the types of processes and furnaces involved. In discussing the latter he gave average efficiency figures. The way in which this talk was given and the general link-up made the whole thing extremely interesting to the hearers.

Mr Ambrose concluded his talk with a coloured sound film entitled "Grass Drying".

Following the talk, with very little time available, a short discussion took place and the meeting concluded with a motion of thanks moved by E. J. Horley.

South Eastern Branch

Mr G. Summerfield, chief fire officer at Kent Oil Refinery, presented a paper on the fighting of oil fires to the South-Eastern Branch on 7 April. He began his talk by stating that there were three factors which contributed to every fire—whether oil or otherwise—these being fuel, oxygen, and heat, and to extinguish the fire it was necessary to eliminate two of these factors. He then described the different methods used in refinery unit areas, oil tankers, and oil storage areas and how these methods differed from the ordinary fire-fighting undertaken by the normal fire brigade.

After Mr Summerfield's talk a lively discussion took place in connexion with equipment used for fire-fighting, the methods of its use, and the prime causes of oil fires. It was gratifying to learn from Mr Summerfield with what ease the normal oil fire could be extinguished.

On 5 May the last Ordinary General Meeting of the present session was held at Rochester, when a talk entitled "Petrochemicals" was given by N. W. Grey, chairman of the Branch.

In the first part of his talk Mr Grey briefly outlined the history of chemical engineering and the progress and development of the manufacture of organic chemicals from petroleum, and stated that world-wide expansion of the petrochemical industry had been unprecedented. In 1925 only 75 tons of products were made from petroleum base material. To-day the production of chemicals from petroleum is 10,000,000 tons and is increasing at an enormous rate.

A short coloured film entitled *The History of the Discovery of Oxygen* was then shown, in which the participants were dressed in the clothes of the period. This film introduced the second part of Mr Grey's talk, in which he explained the use of oxygen in transforming the products of petroleum into the various organic chemicals. To illustrate the processes, Mr Grey drew flow sheets of processes for the manufacture of various products, including hexamethylenetetramine, used on a large scale for explosives in the second world war and for the block busters which devastated German cities.

Mr Grey then discussed the development of plastics, and it was interesting to hear that the origin of the manufacture of plastics dates back to the middle of the 19th Century when a prize of £2000 was offered for the discovery of material that could replace ivory in the manufacture of billiard balls.

The meeting ended by the showing of another film entitled *The Pattern for Chemicals* which portrayed the molecular structures of the various chemicals and how these were changed in order to form organic chemicals.

On 25 April a social gathering was arranged for members and friends of the Branch and took the form of a "Get-Together" where experiences and ideas could be exchanged over a friendly drink.

The function, which was attended by approximately 60 persons, was held at what is now accepted as the home of the South-Eastern Branch — The King's Head Hotel, Rochester.

Piano music provided by a Branch Member contributed to the friendly atmosphere, and it was unanimously agreed that this type of function was a great help in bringing together Branch Members.

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For the purpose of moving drilling derricks without their being dismantled, Cranes (Dereham) Ltd. have designed a special bogie. For each rig, three bogies are required. One is fitted to a cantilever projecting from the centre of the derrick base, and one on either side under similar cantilevers. Each bogie has four 21 × 25 × 20 ply tyres and the design is the subject of British and U.S. patents.

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"Esso Oxford".—Launched at Birkenhead on 31 March, the *Esso Oxford* is the first of six 26,650 dwt tankers now building for the Esso Group. Features of vessels of her type are the use of steam at 850 p.s.i. and 850 F. and pumping equipment to discharge at 3000 tons/hr and to load at 5000 tons/hr.

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Journals 1-324 Available.—The widow of a Fellow of the Institute has available for disposal *Journals* No 1-324 (1914-1950) unbound. Her address can be obtained on application to the Editor.

ADMIRALTY FUELS AND LUBRICANTS ADVISORY COMMITTEE

At the end of 1950 the Admiralty appointed a committee called the Admiralty Oil Quantity Committee, firstly to review questions of the quality of fuels and lubricants for the Royal Navy and secondly to advise whether a permanent Committee should be established to keep such matters continuously under review.

Upon the recommendation that such a permanent Committee should be formed, the Admiralty has set up the Admiralty fuels and Lubricants Advisory Committee under the Chairmanship of the Hon. R. C. Geddes. The Committee consists of:—

Professor F. H. Garner, O.B.E., F.Inst.Pet.—Birmingham University
Dr C. M. Cawley, O.B.E., F.Inst.Pet.—Department of Scientific and Industrial Research
H. S. Gibson, C.B.E., F.Inst.Pet.—President, Institute of Petroleum
I. G. Barr-Adams—Past-President National Lubricating Oil & Grease Federation
Lt.-Col. S. J. M. Auld, O.B.E., M.C., F.Inst.Pet.—Petroleum consultant
B. G. Banks, F.Inst.Pet.—Trinidad Leaseholds Ltd.
J. Dotchin, F.Inst.Pet.—The Shell Petroleum Co.
C. V. Hill, F.Inst.Pet.—Anglo-Iranian Oil Co.
H. F. Jones, M.C., F.Inst.Pet.—British Mexican Petroleum Co.
W. Kay, F.Inst.Pet.—Esso Petroleum Co.
C. Lawrie, M.Inst.Pet.—Vacuum Oil Co.
C. H. W. Smith—Anglo-Iranian Oil Co.
D. B. Vale—The Shell Petroleum Co.

Representatives from the Ministry of Fuel and Power and from various Admiralty Departments also serve on the Committee.

The Committee has appointed a Fuels Technical Sub-Committee under the chairmanship of Professor F. H. Garner, O.B.E., and a Lubricants Technical Sub-Committee under the chairmanship of Dr C. M. Cawley, O.B.E.

Apart from members of the Main Committee serving on these Sub-Committees, the following are also members:—

Fuels Sub-Committee
A. E. Gerty—Regent Oil Co.
C. W. G. Martin, F.Inst.Pet.—The Shell Petroleum Co.
F. G. Richards—Vacuum Oil Co.

Lubricants Sub-Committee
R. W. L. Fox, M.Inst.Pet.—Vacuum Oil Co.
N. G. Gullick, M.Inst.Pet.—Regent Oil Co.
A. R. Stark, F.Inst.Pet.—Anglo-Iranian Oil Co.
R. S. Teale, F.Inst.Pet.—The Shell Petroleum Co.
G. H. Thornley, F.Inst.Pet.—C. C. Wakefield & Co.
E. H. Wild, A.M.Inst.Pet.—Esso Petroleum Co.
J. M. Wilson, M.Inst.Pet.—Anglo-Iranian Oil Co.

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CRUDE OIL PRODUCTION

	March 1953 *Tons*
Iraq Petroleum Co. Ltd. (Kirkuk)	1,870,144
Basrah Petroleum Co. Ltd. (Zubair)	253,221
Mosul Petroleum Co. Ltd. (Ain Zalah)	116,986
Petroleum Development (Qatar) Ltd.	297,839
Kuwait Oil Co. Ltd.	3,246,267
	April 1953 *brl*
Kern Oil Co. Ltd:	
California	106,445
Trinidad	81,781

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Bearing Lubrication—This is the seventh booklet in the Vacuum Technical Series. It deals with bearing feeds, lubricants, and operation, and contains some useful explanatory diagrams. Copies may be obtained from the Vacuum Oil Co. Ltd., Caxton House (East), Tothill Street, London, S.W.1.

The Lummus Company—The Lummus Company is building a hydrodesulphurization unit for Shell at Stanlow. It is understood that with this plant feed stocks need not be vaporized, heavier charge stocks may be desulphurized, and longer on-stream periods are achieved.

THE I.B.P. EXHIBITION

Photography in the petroleum industry is more often than not associated with pictures of refinery and other plant photographed from any angle but the vertical. It was, therefore, refreshing to see at the recent Coronation Exhibition of the Institute of British Photographers that six members of at least one unit—the Shell Photographic Unit—had some fine pictorial efforts on show both in monochrome and in colour transparencies.

In addition, R. White of Maidstone exhibited nine studies of the Kent refinery of Anglo-Iranian, and among the portraits shown was one of Sir Frederick Godber, by Walter Bird.

The Evening Round, by Eric Willmott.

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Gear Lubrication Manual.—No. 6 in the series of technical manuals issued by the Vacuum Oil Co. is entitled "Gear Lubrication". Dealing first with the fundamentals of gear operation, the need for lubrication is discussed and information concerning the lubrication of enclosed and of open gears is given. Like the previous publications in the series, the book is well-illustrated and copies are available upon application to the company.

Borneo Waters, by Derrick Knight, M.B.E.

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Level Gauges—A comprehensive and well-illustrated catalogue of level gauges for the oil industry is available from Richard Klinger Ltd., Sidcup, Kent.

Laboratory Chemicals and Reagents—A 4th edition of this work, which includes specifications of 500 organic and inorganic chemicals in everyday demand, has been published. Copies may be obtained from May & Baker Ltd., Dagenham, Essex.

Teesport Installation—Shell-Mex and B.P. Ltd. have acquired a 22-acre site at Teesport on which an installation will be built for the storage and distribution of fuel oil, diesel oil, kerosine, and aviation fuel.

Fine Chemicals.—A price list of over 2300 fine organic chemicals, some of which are said to be available to research workers for the first time, is available from L. Light & Co. Ltd., Poyle Trading Estate, Colnbrook, Bucks.

AIOC Deepest Well.—At a depth of 12,770 ft, the Omati well in West Papua established a new depth record for wells managed by Anglo-Iranian. Previous record was 12,621 ft in Kariara No. 1 in Central Papua.

PAKISTAN OIL SEARCH

Pakistan Petroleum Ltd. has decided to abandon well No. 4 at Patharia, East Pakistan.

The Burmah Oil Co. Ltd. drilled two wells in this area before the second world war, of which one gave quite encouraging signs of oil but the other was dry.

Pakistan Petroleum renewed the search in 1951 and drilled a well to 5411 ft, but prolonged tests failed to show any worthwhile signs of production. It was then decided to drill one more well close to the first well which had given good oil indications but even this well failed to give any indications of oil-bearing strata.

Geological mapping indicated that the Patharia structure was greatly compressed and faulted, and drilling showed that structure to be even more complex. "The prospects of finding commercial accumulations of oil are considered to have been disproved," concludes the announcement.

The search for oil in the Patharia forest reserve during the last three years has cost about 5 million rupees.

Natural Gas

C. Stribling Snodgrass, F.Inst.Pet., recently visited Karachi to report to Pakistan Petroleum Ltd. on the question of the distribution of gas from Sui in Baluchistan to other parts of the country, with special reference to bringing it to Karachi via Sukkur, Rohri, and Hyderabad. The Company recently discovered natural gas at Sui, and its presence in appreciable quantities has been confirmed by the drilling of a second well which has just been completed.

★ ★ ★

American Society for Testing Materials. Dr F. D. Rossini will deliver the 27th Edgar Masburg Lecture on 1 July 1953 at the annual meeting of the ASTM at the Carnegie Institute of Technology. Dr Rossini's subject will be An excursion in petroleum chemistry.

CORRESPONDENCE

BLOGRO

The Editor,
Institute of Petroleum Review.
Sir,

At the symposium on the 22 April I heard several of those present asking what BLOGRO stood for. I would have been glad to have told them but hesitated to do so for fear of taking what would obviously be a partisan interest.

The purpose of this letter is to explain that the letters stand for The British Lubricating Oil & Grease Research Organisation and is composed of a large number of firms, both large and small, who are contributing on a co-operative basis to research in a number of directions, and in particular to obtain a British engine accessible to all for the purpose of testing and proving lubricants in short time and minimum cost.

It is for others to judge, after reading the paper presented by Mr Perry on our behalf, as to whether we have now been successful in our aim, but I am certain that Britain, having always led the field in all forms of mechanical transportation on land, sea, and in the air, is not only capable of producing a test engine as well as any other country but also one at a more reasonable cost with greater availability.

Finally, I should like to say that BLOGRO has not a closed mind on the design of an engine and is anxious to co-operate with other bodies, e.g. the Institute of Petroleum, the Institution of Mechanical Engineers, the Motor Industry Research Association, etc., in evolving a standard engine or a widely acceptable technique on an existing engine of British design, including consideration of the BLOGRO engine among others.

Yours faithfully,
SYDNEY H. BEAN,
President, BLOGRO.

Government Buildings,
Willow Tree Lane,
Yeading, Middlesex. 30 April, 1953.

4TH WORLD PETROLEUM CONGRESS

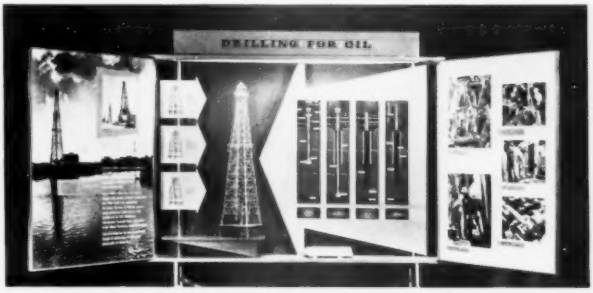
As already announced, the 4th World Petroleum Congress is to be held in Venice in June 1954. British participation in the Congress is being organized by a British National Committee set up by the Institute of Petroleum under the chairmanship of H. S. Gibson, C.B.E. The task of collecting papers to be submitted from Great Britain has been delegated to a Papers Sub-Committee, the chairman of which is Dr E. B. Evans, a vice-president of the Institute.

The general arrangements of the technical sessions of the 4th Congress follow the lines of previous congresses and are as follows:—

I Geology; Geophysics.
II Drilling; Production; Petroleum Engineering.
III Physical operations in oil processing; Oil processes involving chemical conversions.
IV Production of chemicals from petroleum, their properties and application.
V Composition of petroleum; analysis and testing; measurement and control.
VI Utilization of oil products.
VII Construction of equipment; Materials; Corrosion.
VIII Transport, storage and distribution.
IX Economics and statistics; Documentation; Education; Training; Legislation.

In order that plenty of time be allowed for discussion of papers during the Congress the main organizing committee has decided that the number of papers to be presented should be strictly limited, and the allocation of papers from the U.K. is not likely to exceed about 30 in number. The Papers Sub-Committee of the British National Committee is issuing invitations to prospective authors to prepare papers for the Congress, and any person or organization wishing to submit a paper for consideration should communicate as soon as possible with the Editor of the Institute of Petroleum, who is acting as secretary to the Papers Sub-Committee.

In general, papers should deal with recent developments or new problems in the petroleum industry. Subjects of limited scope, such as minor improvements in apparatus, or the application of conventional processes under new conditions, are not generally of sufficient importance for a congress of this character. Papers presented should not have been previously published and preferably should not exceed 5000 words in length. In the first instance, it will be sufficient if the title of the proposed paper, the name of the author and a synopsis of the contents is furnished in order that the Committee may have an opportunity of considering the acceptability of the proposed paper.



A portable oil exhibition now touring museums in Britain consists of 22 display cases covering fifteen subjects and including models, reliefs or dioramas, and photographs. It has been designed by The Shell Petroleum Co. Ltd.

CANADIAN REFINERIES

Although the number of oil refineries operating in Canada at the end of 1952 was the same as a year before, crude oil capacity had increased by 36,850 barrels per day, the major increase being in Ontario (65·5 per cent). Cracking capacity also increased by 23,550 barrels per day, giving facilities to produce 98,265 barrels per day, of gasoline.

In addition there were five absorption plants for recovering naphtha from natural gas, total capacity being 279 M.M. cubic feet per day. These were all in Alberta.

Details extracted from the report (No. 5-2) of the Mineral Resources Division, Canadian Department of Mines and Technical Surveys are given in Tables I and II.

TABLE I. CANADIAN REFINING

Capacity at 31 December 1952

Province	Number operating	Crude capacity, brl/day	Cracking capacity brl/day
Nova Scotia	1	22,000	10,000
New Brunswick	1	300	—
Quebec	4	164,000	92,600
Ontario	5	104,500	40,100
Manitoba	4	19,700	5,825
Saskatchewan	8	50,300	19,650
Alberta	12	68,000	35,900
British Columbia	3	28,350	5,750
N.W. Territories	1	1,250	—
TOTAL	39	458,400	209,825

TABLE II. CRACKED GASOLINE CAPACITY IN CANADIAN REFINERIES, 31 DECEMBER 1952

	Thermal	Catalytic brl/day	Reformed	Total
Nova Scotia	3,300	—	—	3,330
Quebec	10,120	25,700	6,800	42,620
Ontario	15,910	5,970	600	22,480
Manitoba	1,040	1,500	1,100	3,640
Saskatchewan	5,425	2,025	—	7,450
Alberta	9,875	7,000	—	16,875
British Columbia	1,900	—	—	1,900
TOTAL	47,570	42,195	8,500	98,265

★ ★ ★

Chemical Institute.—The Dechema Institute for Chemical Apparatus and Chemistry will be opened on 3 July 1953 at Dechema House, Frankfurt am Main, Rheingau-Allee 25. The aim of the Institute is to display all forms of chemical apparatus and equipment, metering and control apparatus, and raw and new materials used in the industry.

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Instrument Engineers;
Senior Chemists.

The commencing inclusive salaries offered range from £1000 to £2000 per year and will be determined in each case in accordance with the degree of responsibility attached to the individual post and the qualifications and experience of the successful applicants.

Each successful applicant will be required to submit a recent certificate of good health and to sign a secrecy agreement before his appointment is confirmed.

Membership of the Corporation's Pension and Medical Benefit Funds is compulsory.

Applicants should state full details of age, marital status, languages spoken and read, qualifications, experience and present salary and should in the first instance be addressed to SASOL c/o the Kellogg International Corporation, Kellogg House, 7-8 Chandos Street, Off Cavendish Square, London, W.1. Closing date 30 June, 1953.

★ ★ ★

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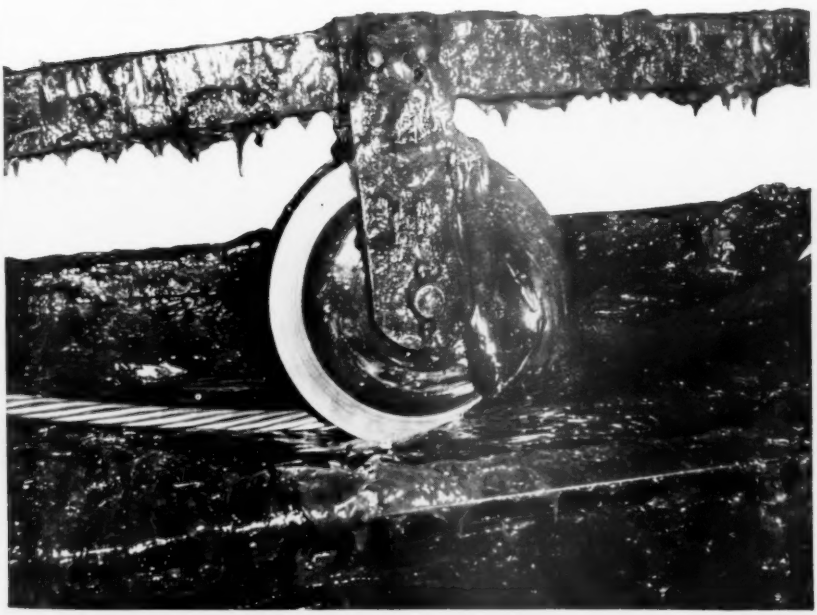

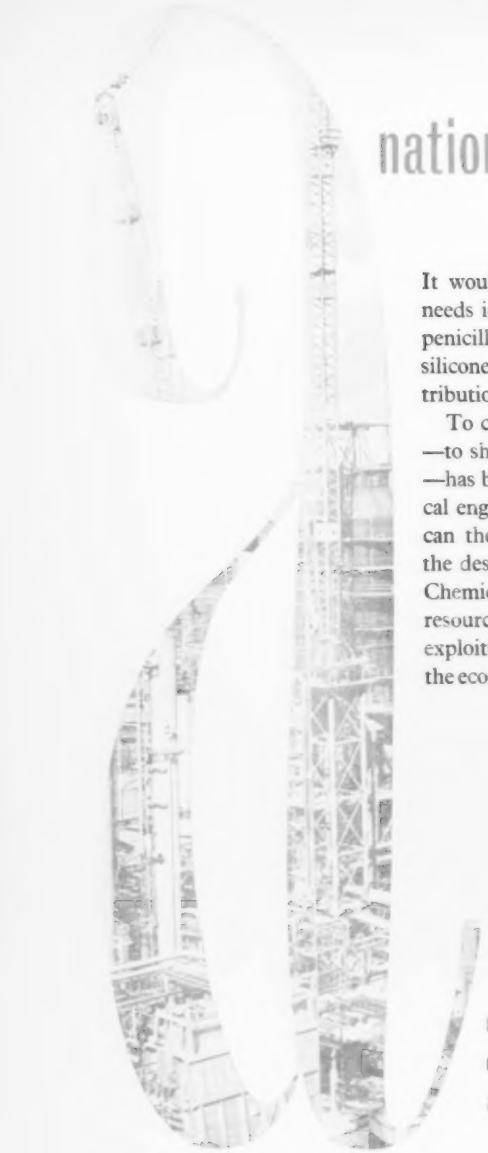

nation needs ideas...

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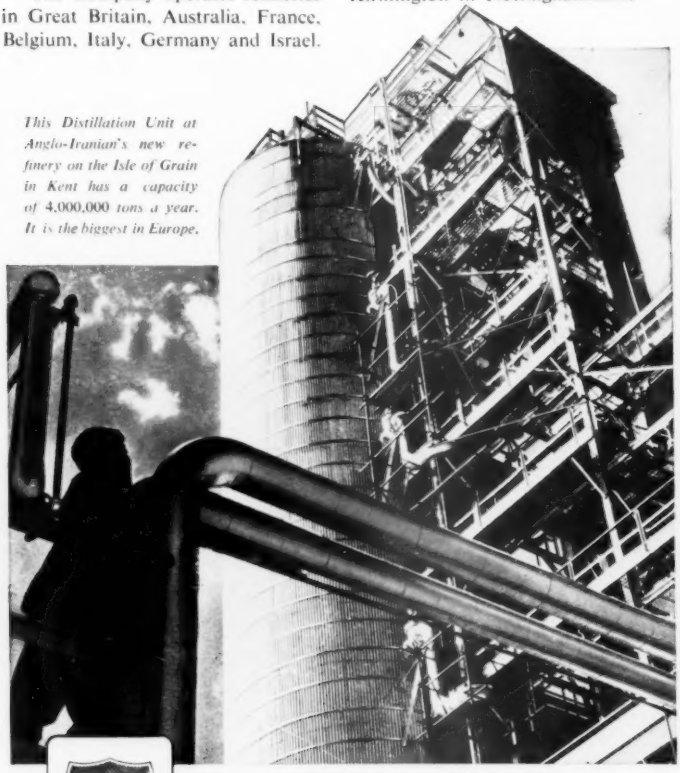

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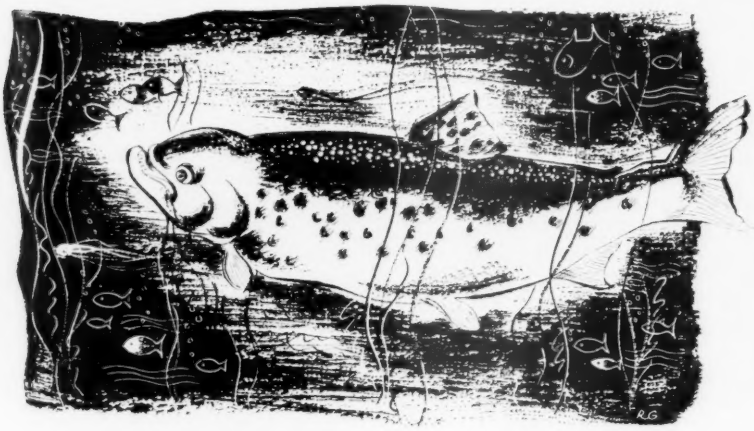

Old Cannibal

In his splendid silver youth he quivered on the fin in the quick-flowing shallows, or broke the surface after flies. Now in his black old age he lies in the deep hole under the bridge, killing the young fry, spoiling the fishing, hated by the angler. Catching him is a tricky problem, needing special skill and special equipment.

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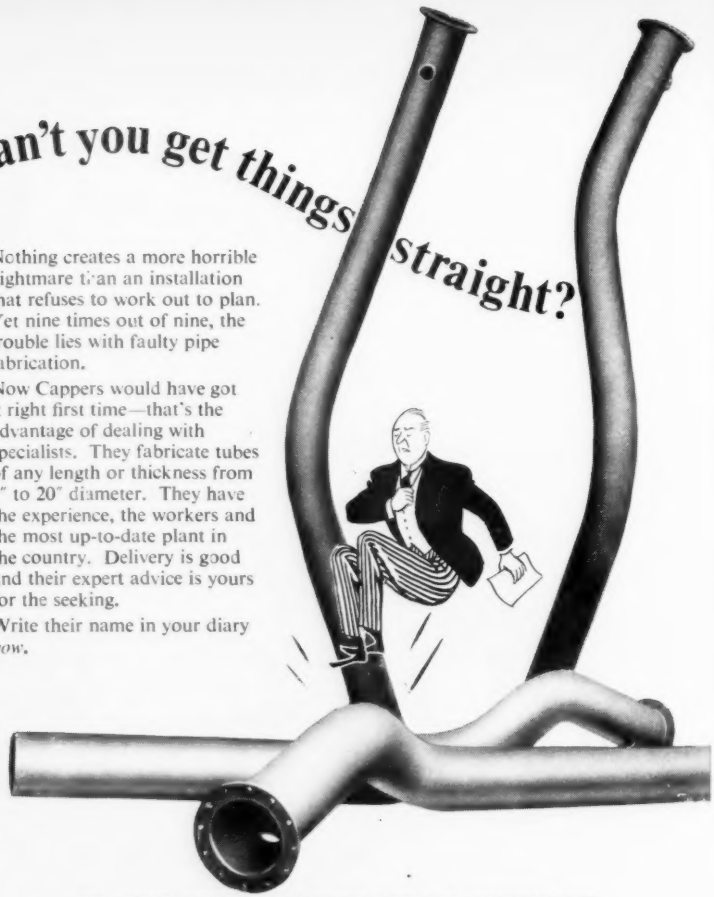

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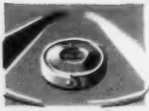

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